

VCO Lab 4

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CTI1301 – VCO – C202512 Section 01

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Clone Ubuntu Part 1a

The screenshot shows the Proxmox Virtual Environment (VE) interface. A modal window titled "Task viewer: VM 323 - Clone" is open, displaying the following information:

Field	Value
Status	stopped: OK
Task type	qmclone
User name	rjpotter@FS-SSO
Node	node101
Process ID	635802
Start Time	2025-12-02 19:21:33
End Time	2025-12-02 19:21:46
Duration	13s
Unique task ID	UPID:node101:0009B39A:A1448B54:692F828D:qmclone:323:rjpotter@FS-SSO:

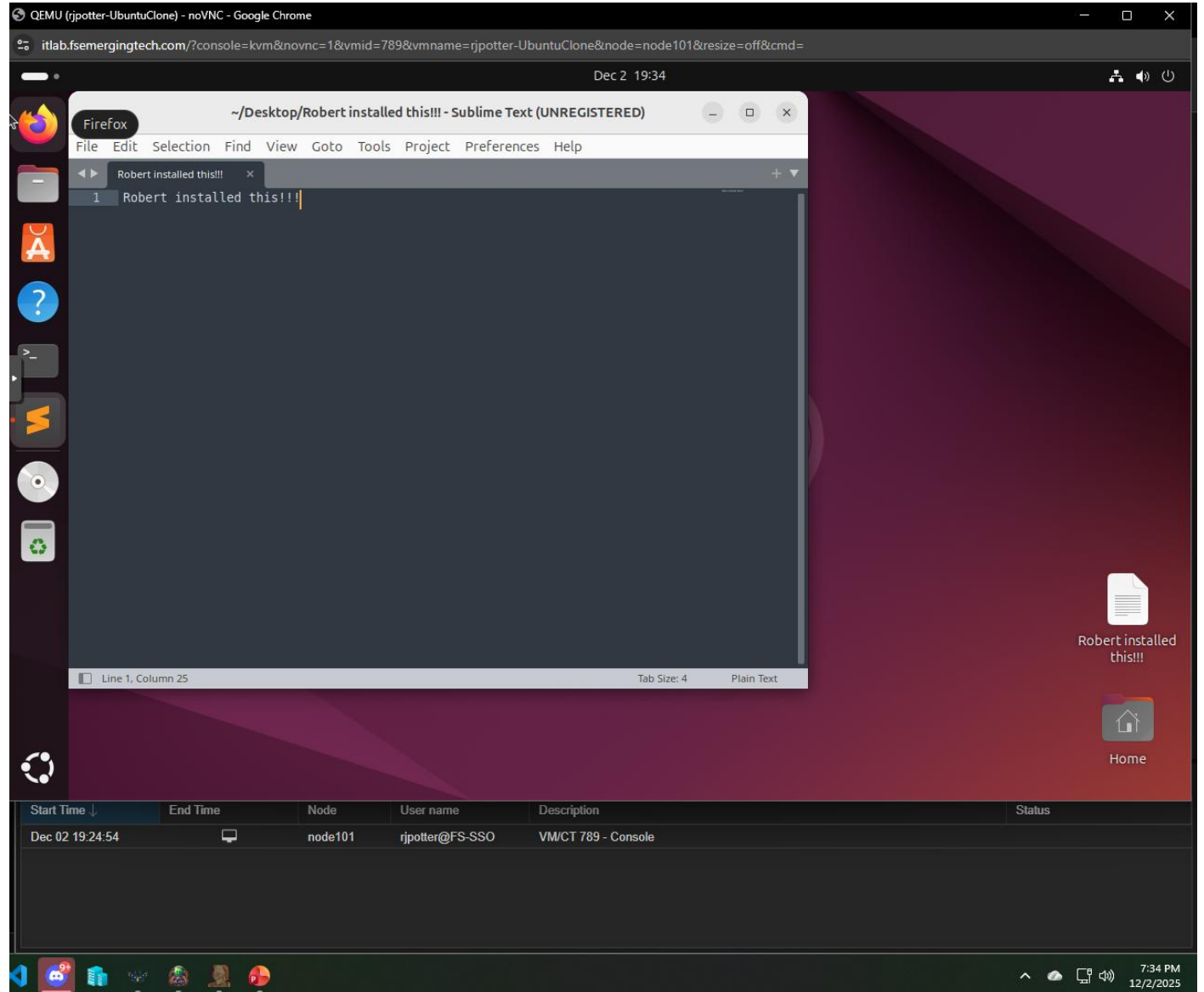
The background interface shows a list of virtual machines under "Datacenter":

- 2512-CT11301-rjpotter
- 139 (rjpotter-Server2025)
- 140 (rjpotter-Rocky)
- 323 (rjpotter-Ubuntu)
- 789 (rjpotter-UbuntuClone)
- 9130102 (VCO-WordPressBitnami)

At the bottom, a "Tasks" table is visible:

Start Time	End Time	Node	User name	Description	Status
Dec 02 19:21:33	Dec 02 19:21:46	node101	rjpotter@FS-SSO	VM 323 - Clone	OK

Sublime Installed Part 1b



Convert to Template Part 2

The screenshot displays the Proxmox Virtual Environment (PVE) web interface. The browser address bar shows the URL `itlab.fsemergingtech.com/#v1:0=qemu%2F789:4:.....`. The interface includes a sidebar with a tree view of the datacenter contents, including VMs 139 (rjpotter-Server2025), 140 (rjpotter-Rocky), 323 (rjpotter-Ubuntu), and 789 (rjpotter-UbuntuClone). The main panel shows the configuration for VM 789, with tabs for Summary, Hardware, Cloud-Init, and Options. A modal window titled "Task viewer: VM 789 - Convert to template" is open, displaying the status of the conversion task. The task is completed with a status of "OK". Below the modal, a table lists recent tasks, including the conversion of VM 789 to a template and its shutdown.

Task viewer: VM 789 - Convert to template

Output	Status
Stop	
Status	stopped: OK
Task type	qmttemplate
User name	rjpotter@FS-SSO
Node	node101
Process ID	666268
Start Time	2025-12-02 19:37:26
End Time	2025-12-02 19:37:27
Duration	1s
Unique task ID	UPID:node101:000A2A9C:A145FF7D:692F8646:qmttemplate:789:rjpotter@FS-SSO:

Start Time ↓	End Time	Node	User name	Description	Status
Dec 02 19:37:26	Dec 02 19:37:27	node101	rjpotter@FS-SSO	VM 789 - Convert to template	OK
Dec 02 19:36:02	Dec 02 19:36:08	node101	rjpotter@FS-SSO	VM 789 - Shutdown	OK

7:38 PM
12/2/2025

Full Clone

Part 3

node110 - Proxmox Virtual Env

itlab.fsemergingtech.com/#v1:0:=qemu%2F789:4:::9::

Virtual Lab Virtual Environment 8.3.3

Virtual Machine 789 (rjpotter-UbuntuTemplate) on node 'node101'

Summary

Hardware

Cloud-Init

Options

Task History

Task viewer: VM 789 - Clone

Output

Status

Stop

Status	stopped: OK
Task type	qmclone
User name	rjpotter@FS-SSO
Node	node101
Process ID	673935
Start Time	2025-12-02 19:41:22
End Time	2025-12-02 19:41:36
Duration	14s
Unique task ID	UPID:node101:000A488F:A1465BB3:692F8732:qmclone:789:rjpotter@FS-SSO:

Tasks

Cluster log

Start Time ↓	End Time	Node	User name	Description	Status
Dec 02 19:41:22	Dec 02 19:41:36	node101	rjpotter@FS-SSO	VM 789 - Clone	OK
Dec 02 19:37:26	Dec 02 19:37:27	node101	rjpotter@FS-SSO	VM 789 - Convert to template	OK
Dec 02 19:36:02	Dec 02 19:36:08	node101	rjpotter@FS-SSO	VM 789 - Shutdown	OK

7:43 PM
12/2/2025

Wordpress Linked Clone

Part 4a

```
QEMU (rjpotter-WordPress) - noVNC - Google Chrome
itlab.fsemergingtech.com/?console=kvm&novnc=1&vmid=791&vmname=rjpotter-WordPress&node=node112&resize=off&cmd=

*** Welcome to WordPress packaged by Bitnami ***
*** Built using Debian GNU/Linux 11 (bullseye) - Kernel 5.10.0-35-amd64 (tty1) ***

*** You can access the application at http://10.1.101.64 ***
*** The default username is 'user' and the default password is 'E0t87IoT9Phn' ***
*** You can find out more at https://docs.bitnami.com/virtual-machine/apps/wordpress/ ***
*** If you find any issues, please visit https://github.com/bitnami/vms/issues ***

*****
To access the console, login with user 'bitnami' and password 'bitnami'
*****

Debian login: bitnami
Password:

Login incorrect
Debian login: bitnami
Password:
Linux debian 5.10.0-35-amd64 #1 SMP Debian 5.10.237-1 (2025-05-19) x86_64

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.

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 | _ | _ | _ |

-> Welcome to WordPress packaged by Bitnami 6.2.2
-> Documentation: https://docs.bitnami.com/virtual-machine/apps/wordpress/
-> Bitnami Support: https://github.com/bitnami/vms/issues
Last login: Wed Jun 18 20:29:04 UTC 2025 on tty1
bitnami@debian:~$ ip address
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: ens18: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether bc:24:11:70:04:76 brd ff:ff:ff:ff:ff:ff
    altname enp0s18
    inet 10.1.101.64/22 brd 10.1.103.255 scope global dynamic ens18
        valid_lft 7150sec preferred_lft 7150sec
    inet6 fe80::be24:11ff:fe70:476/64 scope link
        valid_lft forever preferred_lft forever
bitnami@debian:~$
```

Start Time ↓	End Time	Node	User name	Description	Status
Dec 02 19:47:15		node112	rjpotter@FS-SSO	VM/CT 791 - Console	
Dec 02 19:41:22	Dec 02 19:41:36	node101	rjpotter@FS-SSO	VM 789 - Clone	OK

7:48 PM
12/2/2025

WordPress Site on Ubuntu Part 4b

QEMU (rjpotter-UbuntuNew) - noVNC - Google Chrome

itlab.fsmergingtech.com/?console=kvm&novnc=1&vmid=790&vmname=rjpotter-UbuntuNew&node=node101&resize=off&cmd=

Dec 2 19:52

User's blog

Sample Page

Mindblown: a blog about philosophy.

Hello world!

Welcome to WordPress. This is your first post. Edit or delete it, then start writing!

June 18, 2025

Start Time	End Time	Node	User name	Description	Status
Dec 02 19:47:15		node112	rjpotter@FS-SSO	VM/CT 791 - Console	
Dec 02 19:48:58		node101	rjpotter@FS-SSO	VM/CT 790 - Console	
Dec 02 19:48:56	Dec 02 19:48:58	node101	rjpotter@FS-SSO	VM 790 - Start	OK
Dec 02 19:41:22	Dec 02 19:41:36	node101	rjpotter@FS-SSO	VM 789 - Clone	OK

7:52 PM
12/2/2025

WordPress Backup Part 5

node110 - Proxmox Virtual Envi x + Gemini

itlab.fsemergingtech.com/#v1:0:=qemu%2F7914:21:

Virtual Lab Virtual Environment 8.3.3 Search Documentation Create VM Create CT rjpotter@FS-SSO

Pool View

Datacenter

- 2512-CT11301-rjpotter
 - 139 (rjpotter-Server2025)
 - 140 (rjpotter-Rocky)
 - 323 (rjpotter-Ubuntu)
 - 790 (rjpotter-UbuntuNew)
 - 791 (rjpotter-WordPress)
 - 789 (rjpotter-UbuntuTempla)
 - 9130102 (VCO-WordPressBit)

Virtual Machine 791 (rjpotter-WordPress) on node 'node112' No Tags Start Shutdown Migrate Console More

Summary Backup now Restore Show Configuration Edit Notes Change Protection Remove Storage: backups

Console Hardware Cloud-Init

Task viewer: VM/CT 791 - Backup

Output Status

Stop Download

INFO: VM Name: rjpotter-WordPress
INFO: include disk 'scsi0' 'vmstorage1:base-9130102-disk-0/vm-791-disk-0' 10G
INFO: backup mode: snapshot
INFO: ionice priority: 7
INFO: creating v2dump archive '/mnt/pve/backup2/dump/v2dump-qemu-791-2025_12_02-19_54_25.vma.zst'
INFO: issuing guest-agent 'fs-freeze' command
INFO: issuing guest-agent 'fs-thaw' command
INFO: started backup task 'c3dd13df-8223-478c-9957-21870ae4cc63'
INFO: resuming VM again
INFO: 8% (880.9 MiB of 10.0 GiB) in 3s, read: 293.6 MiB/s, write: 144.3 MiB/s
INFO: 26% (2.7 GiB of 10.0 GiB) in 6s, read: 627.1 MiB/s, write: 155.0 MiB/s
INFO: 34% (3.4 GiB of 10.0 GiB) in 9s, read: 248.9 MiB/s, write: 136.5 MiB/s
INFO: 44% (4.5 GiB of 10.0 GiB) in 12s, read: 366.1 MiB/s, write: 148.7 MiB/s
INFO: 78% (7.9 GiB of 10.0 GiB) in 15s, read: 1.1 GiB/s, write: 138.3 MiB/s
INFO: 100% (10.0 GiB of 10.0 GiB) in 18s, read: 718.8 MiB/s, write: 106.6 MiB/s
INFO: backup is sparse: 7.57 GiB (75%) total zero data
INFO: transferred 10.00 GiB in 18 seconds (568.9 MiB/s)
INFO: archive file size: 763MB
INFO: adding notes to backup
INFO: Finished Backup of VM 791 (00:00:19)
INFO: Backup finished at 2025-12-02 19:54:44
INFO: Backup job finished successfully
TASK OK

Tasks Cluster log

Start Time ↓	End Time	Node	User name	Description	Status
Dec 02 19:47:15		node112	rjpotter@FS-SSO	VM/CT 791 - Console	
Dec 02 19:48:58	Dec 02 19:53:17	node101	rjpotter@FS-SSO	VM/CT 790 - Console	OK
Dec 02 19:48:56	Dec 02 19:48:58	node101	rjpotter@FS-SSO	VM 790 - Start	OK

7:54 PM 12/2/2025

UbuntuNew Backup Part 6a

The screenshot displays the Proxmox Virtual Environment (VE) interface. The main window shows the 'Virtual Machine 790 (rjpotter-UbuntuNew) on node 'node101''. The 'Summary' tab is active, showing details about the VM. A 'Task viewer: VM/CT 790 - Backup' window is open, displaying the output of a backup task. The output shows the progress of the backup, including the amount of data transferred and the time taken. The task is labeled 'INFO: Finished Backup of VM 790 (00:00:50)' and 'INFO: Backup finished at 2025-12-02 19:57:57'. Below the task viewer, a table lists recent tasks.

Start Time ↓	End Time	Node	User name	Description	Status
Dec 02 19:57:07	Dec 02 19:57:57	node101	rjpotter@FS-SSO	VM/CT 790 - Backup	OK
Dec 02 19:48:58	Dec 02 19:53:17	node101	rjpotter@FS-SSO	VM/CT 790 - Console	OK
Dec 02 19:48:56	Dec 02 19:48:58	node101	rjpotter@FS-SSO	VM 790 - Start	OK

Grub rescue

Part 6b

node110 - Proxmox Virtual Env

itlab.fsemergingtech.com/#v1:0:=qemu%2F790:4:::21::

Virtual Lab Virtual Environment 8.3.3

Pool View

- Datacenter
 - 2512-CT11301-rjpotter
 - 139 (rjpotter-Server2025)
 - 140 (rjpotter-Rocky)
 - 323 (rjpotter-Ubuntu)
 - 790 (rjpotter-UbuntuNew)
 - 791 (rjpotter-WordPress)
 - 789 (rjpotter-UbuntuTemplate)
 - 9130102 (VCO-WordPressBltnami-v2506)

Virtual Machine 790 (rjpotter-UbuntuNew) on node 'node101'

Summary

Backup now | Restore | Show Configuration | Edit Notes | Change Protection | Remove

Storage: backups

Format | Size

vma.zst | 4.55 GB

Console

QEMU (rjpotter-UbuntuNew) - noVNC - Google Chrome

itlab.fsemergingtech.com/?console=kvm&novnc=1&vmid=790&vmname=rjpotter-UbuntuNew&node=n...

SeaBIOS (version rel-1.16.3-0-ga6ed6b701f0a-prebuilt.qemu.org)

Machine UUID 0c1fe4e1-5239-4c5e-8e64-12482905889e

Booting from Hard Disk...

error: file '/boot/grub/i386-pc/normal.mod' not found.

Entering rescue mode...

grub rescue>

Tasks Cluster log

Start Time ↓	End Time	Node	User name	Description	Status
Dec 02 19:59:25		node101	rjpotter@FS-SSO	VM/CT 790 - Console	
Dec 02 19:59:23	Dec 02 19:59:25	node101	rjpotter@FS-SSO	VM 790 - Start	OK
Dec 02 19:57:07	Dec 02 19:57:57	node101	rjpotter@FS-SSO	VM/CT 790 - Backup	OK
Dec 02 19:48:58	Dec 02 19:53:17	node101	rjpotter@FS-SSO	VM/CT 790 - Console	OK
Dec 02 19:48:56	Dec 02 19:48:58	node101	rjpotter@FS-SSO	VM 790 - Start	OK

8:02 PM 12/2/2025

Restore Part 7

node110 - Proxmox Virtual Envi x + Gemini

itlab.fsemergingtech.com/#v1:0:=qemu%2F790:4:::21::

Virtual Lab Virtual Environment 8.3.2

Pool View

- 2512-CTI1301-rjpotter
 - 139 (rjpotter-Server2025)
 - 140 (rjpotter-Rocky)
 - 323 (rjpotter-Ubuntu)
 - 790 (rjpotter-UbuntuNew)
 - 791 (rjpotter-WordPress)
 - 789 (rjpotter-UbuntuTempla)
 - 9130102 (VCO-WordPressBili)

Virtual Machine 790 (rjpotter-UbuntuNew) on node 'node101'

Summary Console Hardware Cloud-Init

Backup now Restore Show Configuration Edit Notes Change Protection Remove Storage: backups

Name	Notes	Date ↓	Format	Size
vzdump-qemu-790-2025_...	rjpotter-UbuntuNew - Midterm Part 6	2025-12-02 19:57:07	vma.zst	4.55 GB

Task viewer: VM 790 - Restore

Output Status

Stop Download

```
progress 82% (read 14087553024 bytes, duration 11 sec)
progress 83% (read 14259322880 bytes, duration 12 sec)
progress 84% (read 14431092736 bytes, duration 12 sec)
progress 85% (read 14602928128 bytes, duration 12 sec)
progress 86% (read 14774697984 bytes, duration 13 sec)
progress 87% (read 14946533376 bytes, duration 13 sec)
progress 88% (read 15118303232 bytes, duration 13 sec)
progress 89% (read 15290138624 bytes, duration 13 sec)
progress 90% (read 15461908480 bytes, duration 14 sec)
progress 91% (read 15633743872 bytes, duration 14 sec)
progress 92% (read 15805513728 bytes, duration 14 sec)
progress 93% (read 15977283584 bytes, duration 15 sec)
progress 94% (read 16149118976 bytes, duration 15 sec)
progress 95% (read 16320888832 bytes, duration 15 sec)
progress 96% (read 16492724224 bytes, duration 16 sec)
progress 97% (read 16664494080 bytes, duration 16 sec)
progress 98% (read 16836329472 bytes, duration 16 sec)
progress 99% (read 17008099328 bytes, duration 17 sec)
progress 100% (read 17179869184 bytes, duration 17 sec)
total bytes read 17179869184, sparse bytes 8628383744 (50.2%)
space reduction due to 4K zero blocks 1.6%
rescan volumes...
TASK OK
```

Tasks Cluster log

Start Time ↓	End Time	Node	User name	Description	Status
Dec 02 20:05:18	Dec 02 20:06:33	node101	rjpotter@FS-SSO	VM 790 - Restore	OK
Dec 02 20:02:58	Dec 02 20:03:00	node101	rjpotter@FS-SSO	VM 790 - Stop	OK
Dec 02 19:59:25	Dec 02 20:02:59	node101	rjpotter@FS-SSO	VM/CT 790 - Console	OK
Dec 02 19:59:23	Dec 02 19:59:25	node101	rjpotter@FS-SSO	VM 790 - Start	OK
Dec 02 19:57:07	Dec 02 19:57:57	node101	rjpotter@FS-SSO	VM/CT 790 - Backup	OK

8:06 PM 12/2/2025

Snapshot Part 8a

The screenshot displays the Proxmox Virtual Environment (PVE) web interface. The main window shows the 'Virtual Machine 790 (rjpotter-UbuntuNew) on node 'node101''. The 'Summary' tab is active, showing details about the VM's state and hardware. A 'Task viewer: VM 790 - Snapshot' dialog box is open, displaying the output of the snapshot operation. The output shows the VM state and RAM being saved, followed by the completion of the snapshot process. The 'Tasks' tab at the bottom shows a list of recent tasks, including the snapshot operation.

Task viewer: VM 790 - Snapshot

Output

Stop

saving VM state and RAM using storage 'vmstorage1'

13.03 MiB in 0s
557.85 MiB in 1s
1.08 GiB in 2s
1.59 GiB in 3s
2.11 GiB in 4s
2.37 GiB in 5s
2.68 GiB in 6s
2.87 GiB in 7s

completed saving the VM state in 8s, saved 3.09 GiB
snapshotting 'drive-scsi0' (vmstorage1:vm-790-disk-0)
TASK OK

Tasks

Start Time	End Time	Node	User name	Description	Status
Dec 02 20:07:41		node101	rjpotter@FS-SSO	VM/CT 790 - Console	
Dec 02 20:15:48	Dec 02 20:15:57	node101	rjpotter@FS-SSO	VM 790 - Snapshot	OK
Dec 02 20:14:12	Dec 02 20:14:21	node101	rjpotter@FS-SSO	VM 790 - Delete Snapshot	OK
Dec 02 20:12:35	Dec 02 20:12:48	node101	rjpotter@FS-SSO	VM 790 - Snapshot	OK
Dec 02 20:07:35	Dec 02 20:07:37	node101	rjpotter@FS-SSO	VM 790 - Start	OK

Youtube open, Sublime and new file Part 8b

QEMU (rjpotter-UbuntuNew) - noVNC - Google Chrome

itlab.fsemmergingtech.com/?console=kvm&novnc=1&vmid=790&vmname=rjpotter-UbuntuNew&node=node101&resize=off&cmd=

Dec 2 20:17

Huntrix's "What It Sou x

www.youtube.com/watch?v=vjaKvvuRW... Sign in

YouTube Search

Next: "Takedown" Song - K-POP DEMON HUNTERS Movie Clip (2025)

Sublime Text (UNREGISTE... Tools Project Preferences Help

Kpop Demonhunters was great!

Kpop Demonhunters ...

Robert installed this!!!

Home

Start Time	End Time	Node	User name	Description	Status
Dec 02 20:07:41		node101	rjpotter@FS-SSO	VM/CT 790 - Console	
Dec 02 20:15:48	Dec 02 20:15:57	node101	rjpotter@FS-SSO	VM 790 - Snapshot	OK
Dec 02 20:14:12	Dec 02 20:14:21	node101	rjpotter@FS-SSO	VM 790 - Delete Snapshot	OK
Dec 02 20:12:35	Dec 02 20:12:48	node101	rjpotter@FS-SSO	VM 790 - Snapshot	OK
Dec 02 20:07:35	Dec 02 20:07:37	node101	rjpotter@FS-SSO	VM 790 - Start	OK

Line 1, Column 20 Tab Size: 4 Plain Text

8:17 PM 12/2/2025

Rollback Part 8c

The screenshot displays the Virtual Lab interface for a Proxmox Virtual Environment. The main window shows the 'Virtual Machine 790 (rjpotter-UbuntuNew) on node 'node101''. The 'Task viewer: VM 790 - Rollback' dialog is open, showing the 'Output' tab with a progress log of the rollback process. The log indicates the rollback is 100% complete and successful. Below the task viewer, a table lists the tasks performed on the cluster.

Start Time	End Time	Node	User name	Description	Status
Dec 02 20:19:31	Dec 02 20:19:54	node101	rjpotter@FS-SSO	VM 790 - Rollback	OK
Dec 02 20:15:48	Dec 02 20:15:57	node101	rjpotter@FS-SSO	VM 790 - Snapshot	OK
Dec 02 20:14:12	Dec 02 20:14:21	node101	rjpotter@FS-SSO	VM 790 - Delete Snapshot	OK
Dec 02 20:12:35	Dec 02 20:12:48	node101	rjpotter@FS-SSO	VM 790 - Snapshot	OK
Dec 02 20:07:41	Dec 02 20:19:31	node101	rjpotter@FS-SSO	VM/CT 790 - Console	OK

Ubuntu Snapshot State Part 8d

QEMU (rjpotter-UbuntuNew) - noVNC - Google Chrome

itlab.fsemergingtech.com/?console=kvm&novnc=1&vmid=790&vmname=rjpotter-UbuntuNew&node=node101&resize=off&cmd=

Dec 2 20:23

Start Time ↓	End Time	Node	User name	Description	Status
Dec 02 20:21:57		node101	rjpotter@FS-SSO	VM/CT 790 - Console	
Dec 02 20:19:31	Dec 02 20:19:54	node101	rjpotter@FS-SSO	VM 790 - Rollback	OK
Dec 02 20:15:48	Dec 02 20:15:57	node101	rjpotter@FS-SSO	VM 790 - Snapshot	OK
Dec 02 20:14:12	Dec 02 20:14:21	node101	rjpotter@FS-SSO	VM 790 - Delete Snapshot	OK
Dec 02 20:12:35	Dec 02 20:12:48	node101	rjpotter@FS-SSO	VM 790 - Snapshot	OK

8:22 PM
12/2/2025

Powered Down Part 9

node110 - Proxmox Virtual Envi

itlab.fsemergingtech.com/#v1:0:=%2Fpool%2F2512-CTI1301-rjpottter:4::::29::

Virtual Lab Virtual Environment 8.3.2

Documentation Create VM Create CT rjpottter@FS-SSO

Pool View

Resource Pool: 2512-CTI1301-rjpottter

Search:

Summary Members Permissions

Type	Description	Disk usage...	Memory us...	CPU usage	Uptime	Host CPU ...
qemu	139 (rjpottter-Server2025)				-	
qemu	140 (rjpottter-Rocky)				-	
qemu	323 (rjpottter-Ubuntu)				-	
qemu	790 (rjpottter-UbuntuNew)				-	
qemu	791 (rjpottter-WordPress)				-	
qemu	789 (rjpottter-UbuntuTemplate)				-	

Tasks Cluster log

Start Time	End Time	Node	User name	Description	Status
Dec 02 20:21:57	Dec 02 20:24:42	node101	rjpottter@FS-SSO	VM/CT 790 - Console	OK
Dec 02 20:19:31	Dec 02 20:19:54	node101	rjpottter@FS-SSO	VM 790 - Rollback	OK
Dec 02 20:15:48	Dec 02 20:15:57	node101	rjpottter@FS-SSO	VM 790 - Snapshot	OK
Dec 02 20:14:12	Dec 02 20:14:21	node101	rjpottter@FS-SSO	VM 790 - Delete Snapshot	OK
Dec 02 20:12:35	Dec 02 20:12:48	node101	rjpottter@FS-SSO	VM 790 - Snapshot	OK

8:25 PM 12/2/2025